

An Example to Follow In the COVID-19 Pandemic: Together For Celiac Disease Patients

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Abstract The El Pasoans fighting hunger (EPFH) food bank is a non-profit hunger relief organization that delivers food to partner groups which feed people who are food insecure within the city. The United States Department of Agriculture is the food bank main source of food, other food sources include Feeding America, grocery chains and food donors. While the EPFH food bank has been successful in fulfilling its mission, there has been renewed interest as to if the EPFH food bank takes interest in people with celiac disease by delivering gluten-free foods to them. This article focuses on food delivery with or without gluten, why healthy people order gluten-free products and explains if gluten-free food has beneficial effects on healthy people.

Keywords: food bank, celiac disease, gluten, gluten-free diet

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1. Introduction

A food bank is a non-profit organization that collects and allocates food to charities that fight hunger. Food banks aid in the collection, storage, and distribution of food obtained from donors, and with the support of volunteers successfully disseminates these foods to partner agencies [1]. While a food bank houses a lot of food and other products that have been donated to a community, a food pantry reach out directly to individuals in a community especially individuals living in areas of high need [1]. The food bank has also adopted a new way of food distribution called the mobile pantry, which aids in distributing food to remote sites that are lacking an established food pantry.

The El Pasoans fighting hunger (EPFH), El Paso's food bank, is a not-for-profit hunger alleviation organization, which serves as the distribution center that inspects, packages, and delivers millions of pounds of food to partner groups. These partner groups consist of shelters, food pantries, religious organizations/institutions, and food kitchens that feed 1 in 4 adults and 1 in 3 children who suffer from food insecurity and live in El Paso [2]. A food pantry can be in a church, school or community center as opposed to the food bank which is mainly the warehouse where food from all over the country transported to the food bank is collected, sorted, and then later distributed. Direct food distributions to individuals rarely take place at the food bank but there is an alternative way of providing food to people who go to the food bank seeking food assistance. This is known as the

emergency food box, and it is utilized when the individual or family requesting food assistance does not live close or have access to a food pantry and are really in need of food.

2. Food Delivery with or without Gluten

The EPFH food bank obtains food by working with The United States Department of Agriculture (USDA), Feeding America, grocery chains, and accepting food donations from organizations. The activity of the food bank is operated by staff and volunteers [2]. The USDA which is the main source of food for the food bank also established different food programs such as the Commodity Supplemental Food Program (CSFP) which targets seniors 60 years and above and the low-income population by providing them with nutrient-dense USDA approved foods which they can incorporate into their everyday meals [3]. Another well-known program established by the USDA is the National School Lunch Program (NSLP) which provides nutritious, balanced low-cost or free of cost lunches to kids in public schools, non-profit private schools, and residential childcare institutions for their everyday lunch meal [4]. These two programs are the main food programs operated in the EPFH food bank. The USDA also provides food targeted to the different nutritional requirements of each age group. Another main source of food comes from donations such as monetary donations which helps the food bank buy high-quality food products which are distributed to people in need or donations from retail stores, local agencies, and other food banks within the state.

The EPFH food bank consistently tries to fulfill its mission which is 'to combat the hunger crisis in our region by strategically procuring and distributing nutritious food through community partners...because no one should go hungry', and as the only food bank in El Paso as well as a member of Feeding America, EPFH has been successful in partnering with over 130 food pantries in the region as well as assisting in applications for Supplemental Nutrition Assistance Program (SNAP) and nutrition education of its citizens [5]. During the distribution of food to clients, it is important to combine it with nutrition education to build trust with clients and provide information on the quality of food being given to them by the food bank. This fulfills the objective of Feeding America which is to bring nutrition education to the public to enrich their knowledge of nutrition so that they can make better food choices to improve their wellbeing. The USDA which provides most of the food distributed by the food bank uses 'my plate' formerly known as the food pyramid which shows instructions on how people of all ages should include all the food groups on every meal [6]. The USDA encourages people to include more whole grains, fruits and vegetables, low-fat dairy products in their diet through Supplemental Nutrition Assistance Program Education (SNAP-Ed). The focus of this program is to educate people on how to make healthier food choices and improve daily physical activity to prevent chronic diseases such as diabetes and Type 2 diabetes. The EPFH food bank delivers all available food products including gluten-free and gluten-containing food products to food pantries to help those who are food insecure.

3. Why Healthy People Order Gluten-Free Products

Celiac disease (CD), which is an acute immunological syndrome, is characterized by intestinal symptoms and nutrient malabsorption resulting in the lack of ability to consume gluten and gluten products. Accurate prognosis as well as the consumption of a diet free of gluten is crucial for efficiently treating this syndrome [7,8]. This disease is not a focus of the SNAP-Ed program guidelines as the food bank do not treat specific diseases and do not have a Registered Dietitian on-site that can provide a one-on-one medical nutrition therapy approach to clients in need of food. The food bank efforts are like the first emergency place people go to look for food sources when they run out of food.

About 1% of people in the western world, or 1 in 133 people are currently affected by CD, of which majority of the individuals affected have not been diagnosed with the syndrome [9,10,11]. In the last 30 years, there has been increased consumption of gluten-free foods due to reasons such as traditional, social media promotion, intense aggressive marketing from manufacturers and retail partners [12,13]. There is a high demand for gluten-free products as people are consistently trying to avoid food products containing gluten, people buy gluten-free products due to them having CD, or due to the mistaken

belief that gluten-free foods are nutritionally healthier than the typical western diet and/or can lead to weight loss. Some people auto diagnose themselves with the CD just because they consume a meal containing gluten and experienced bloating or stomach discomfort, leading them to exclude gluten from their diet without any medical diagnosis.

Malabsorption of nutrients in patients with CD have been observed to result in weight loss, and as treatment of the disease progresses, the intestines gradually repair resulting in an increase in nutrient absorption and possibly weight gain. Most food products labeled gluten-free are usually high in calories, low in fiber, and have a high glycemic index. Fat and sugar are also added in some food products to make up for the absence of gluten [14,15,16]. A study by Kim et al showed that the consumption of a GFD in healthy people resulted in weight loss, reduced waist circumference and an increase in HDL levels compared to individuals consuming a normal diet [17,18]. The limitation of this study includes but not limited to only about 1.3% of healthy people who were reported to strictly follow a GFD [17]. Gluten-free products were observed to be mostly consumed by individuals who are conscious of their health, educated women at risk of cardiovascular diseases and individuals seeking to lose weight [19,20,21]. Another study carried out on athletes to determine their main source of information on gluten-free products showed that most athletes got their information on gluten-free products online, other sources of information recorded include trainers and other athletes. No report on the effect of gluten-free products on weight loss was recorded [22]. A comparison of GFD and diet containing gluten were carried out, in which 13 healthy cyclists received either a GFD or gluten-containing diet for a week. Analysis of both intestinal symptoms and athletic performance showed that there was no significant difference between both diet [22,23].

4. Effect of Gluten-free Food on Healthy People

GFD has been observed to cause possible nutritional deficiencies in individuals consuming this diet; gluten-free products contain lower protein content when compared to other food groups. A study analyzed the total energy, fiber content, saturated fats, total sugar, and sodium content of both gluten-free products and gluten-containing products and observed no difference in both products [24,25,26]. Another study in Austria observed a low sodium and fiber content in most gluten-free foods, the protein content in gluten-free products in more than half of all food groups were also observed to be low [27]. Both men and women on GFD consumed lower amounts of carbohydrates, fiber, niacin, folate, iron, and calcium, and higher amounts of fat especially saturated fat and sodium, than men and women on a gluten-containing diet [27]. Apart from the nutritional deficiencies of gluten-free foods, gluten-free products have also been studied to be more expensive compared to products containing gluten [12,28].

5. Conclusions

The EPFH food bank works closely with food pantries in the city and delivers all available food products including gluten-free and gluten-containing food products to help those who are food insecure. Current evidence for likely harms of a GFD includes nutritional deficiencies as most studies observed GFDs and products to contain low amounts of protein, vitamins, minerals, and fiber, and increased financial cost as food products containing gluten have been observed to be more expensive compared to food products lacking gluten. Overall, healthy people adhering to a GFD do not consume enough nutrient-dense foods to meet all nutritional recommendations thereby they lack essential macronutrients and micronutrients in their diet. Also, weight loss resulting from the consumption of a GFD can be attributed to some essential nutrients lacking in the diet or the malabsorption of nutrients in patients with CD. People should be advised to consume a GFD only if they have gluten intolerance, and most importantly they should be under the care and supervision of health professionals.

Conflicts of Interest

None.

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